

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON

CASCADE GENERAL, INC.,)	
)	No. 05-1334-HU
Plaintiff,)	
)	
v.)	
)	OPINION
)	
POWERHOUSE DIESEL SERVICES,)	
INC.,)	
)	
Defendant.)	

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HUBEL, Magistrate Judge:

This is a breach of contract case brought by plaintiff Cascade
General, Inc. ("Cascade") against Powerhouse Diesel Services, Inc.

1 ("Powerhouse"). The action was tried to the court.

2 Findings of Fact

3 On March 11, 2004, Cascade contracted with the State of Alaska
4 to refurbish the machinery and ship systems aboard the M/V Columbia
5 (the vessel) for the Alaska Marine Highway System ("AMHS").
6 Powerhouse had assisted Cascade in the development of the bid
7 specifications for the overhaul of the main propulsion engines, and
8 on February 2, 2004, submitted a bid for the engine overhaul.
9 Powerhouse's bid was \$1,409,720.20. Exhibits 6, 512. Powerhouse's
10 bid included a 24-week production schedule commencing from the date
11 of sea trials to the commissioning of the engines.

12 The schedule was apparently based on five-day weeks, and
13 called for four weeks (20 work days) to disassemble the engines,
14 eight weeks (40 work days) of "demobilization," when some
15 disassembled engine parts would be replaced, repaired, or
16 reconditioned in Powerhouse's California shop, and 12 weeks (60
17 work days) to reassemble the engines.¹ Exhibit 6. The bid included
18 testing and documentation. Exhibit 512.

19 Cascade incorporated Powerhouse's bid for the engine work into
20 its \$7,083,043 bid for the overhaul of the vessel. On June 16,
21 2004, the State of Alaska officially accepted Powerhouse as the
22 subcontractor for the main engine overhaul. The contract between
23 Cascade and AMHS called for two sea trials. The first sea trials,
24 prior to the vessel's arrival at the shipyard in Portland, were to
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26 ¹ The evidence is conflicting on how many hours a day the
27 Powerhouse crew worked or planned to work. See Exhibit 517 and
deposition testimony of William Arthur.

1 establish baseline systems performance. The second trials were to
2 occur after the overhaul period, to compare performance to the
3 original baselines.

4 On March 17, 2004, Cascade forwarded a Purchase Order for
5 Powerhouse's work on the engines. Exhibit 7. The forwarding letter
6 with the Purchase Order specified that all of the General and
7 Special Conditions, Drawings, Specifications, Addenda, Amendments,
8 Modifications and other documents made part of the contract between
9 Cascade and AMHS would be incorporated into the subcontract between
10 Powerhouse and Cascade. Id. The letter also provided that payment
11 for materials and equipment would be made 30 days from the date
12 that the onsite AMHS inspector accepted the material or equipment
13 and authorized its use on the project; that payment for labor would
14 be made bi-weekly based upon physical progress as agreed to by
15 Cascade; and that Cascade would withhold warranty retention from
16 the invoices submitted by Powerhouse.² Id.

17 Cascade sent Powerhouse documents titled "Required
18 Subcontractor Clauses." Exhibit 7. Among other things, the
19 subcontractor clauses provided that the prime contractor agreed to
20 pay the subcontractor for satisfactory performance within eight
21 working days after receiving payment from the State of Alaska; that
22 the prime contractor would pay the subcontractor interest on any
23 amounts not paid within eight working days after receiving payment
24 from the state, in the amount of 10.5%, commencing the day after
25

26 ² Between September 16, 2004 and April 15, 2005, Cascade
27 withheld \$83,169 on this basis.

1 the eighth working day; and that the prime contractor would pay the
2 subcontractor interest on retainage at the rate of 10.5%. Id.

3 On March 19, 2004, Jim Jones, president of Powerhouse,
4 accepted the subcontract and signed a copy of the forwarding letter
5 setting out the terms of the subcontract. Id.

6 The subcontract between Cascade and Powerhouse provided for
7 work sequencing and scheduling as follows:

8 3.3 Work Sequence and Schedule

9 The time-frame for main engine overhaul and foundation
10 inspections described in this section of these
11 specifications, shall be separate and distinct from the
12 Engine Room systems work (Section 4 of these
13 specifications), the main engine and aux machinery
exhaust systems modifications (Section 5 of these
specifications), and the main propulsion overhaul work on
the shafts, bearings, seals and CPP systems (this section
of these specifications).

14 Two mutually exclusive, non-concurrent Work Groups are
15 established as follows:

16 **Work Group 1**

17 Main engine overhauls (Section 3.6 of these specifications),
and

18 Main engine and reduction gear foundation inspections
19 (Section 3.7 of these specifications)

20 **and**

21 **Work Group 2**

22 Shaft bearing and seals overhauls (Section 3.10 of these
specifications),

23 CPP systems (Section 3.11 of these specifications)

24 Engine Room systems modifications (Section 4 of these
specifications),

25 Main engine exhaust systems modifications (Section 5 of
26 these specifications).

1 The Contractor may complete either Work Group 1 or Work
2 Group 2 first at his option, within the context of the
3 dry-docking date constraints stated in Section A.2 of
4 these specifications.

5 Section 3.6 of the subcontract identified main engine overhaul
6 as a Work Group 1 item, as defined in Section 3.3. See Exhibits 4,
7 508. The main engine systems, as defined in the contract between
8 AMHS and Cascade, are engine blocks, cylinder blocks, cylinder
9 heads and engine internals; built-on pumps, injectors, strainers,
10 filters, pressure regulating valves, governors, alarms and safety
11 systems; on-engine piping or piping components that leave and
12 return to the main engine itself; on-engine piping to the points of
13 connection to external systems; engine-mounted electrical
14 components, transducers and switches; engine mounts; jacking
15 screws; turbo-chargers and air-induction system; exhaust manifold
16 system (between engine and turbo); on-engine fuel systems; engine
17 controls and sensors; lube oil sump connections. Exhibit 4, 508,
18 section 3.6.1.1.1.

19 Ancillary equipment to the main engine systems includes engine
20 barring devices; vibration dampers; jacket water, intercooler, and
21 lube oil coolers; jacket water, intercooler and lube oil Amot
22 (thermostatic valves); specified lube oil swing check and three-way
23 valves; and combustion air and control air mechanical gauges. Id.

24 The scope of Powerhouse's bid was "the work to be performed in
25 relation to the main engine overhaul as defined in Section 3.6-
26 Subsection 3.6.1.1.1." Exhibit 7. Powerhouse's bid for the engine
27 work, including its manning schedules and budgets, was premised on
28 the existence of the non-concurrent work groups, and on

1 Powerhouse's unimpeded access to the engine room during the
2 disassembly phase, as provided in Section 3.3 of the subcontract.

3 The prime contract between Cascade and AMHS permitted Cascade
4 to perform any "nonpropulsion-related work," as well as work on the
5 reduction gears and the torsional couplings "concurrently with the
6 main engine overhaul work." Exhibit 4, Exhibit 508, ¶ 3.3. However,
7 such concurrent work could

8 only proceed if it is demonstrated to the owner's [i.e.,
9 AMHS's] satisfaction that it will not increase owner
10 costs, negatively impact schedule, crew and vessel safety
11 or otherwise impede, cause contamination of, or
12 compromise the main engine work or sea trials. The
Contractor's work sequence must be approved by the Owner
in writing before any of the above tasks can commence in
accordance with Section 1D.3 of these specifications.

13 Id. Powerhouse anticipated that Cascade would do its own work in
14 the engine room during the demobilization period, when Powerhouse
15 was expected to be manufacturing and refurbishing parts in
16 California, with only a few of its people on board the vessel for
17 clean up and inspection.

18 Dave Byers was the Cascade project manager. On June 2, 2004,
19 at an engineering meeting following a pre-construction meeting,
20 Byers informed AMHS that Cascade would not be able to complete the
21 contract on schedule without being able to perform its own work
22 concurrently with the main engine overhaul. Exhibit 511.

23 Thomas Atwood, AMHS's resident engineer, agreed that
24 concurrent work could take place "if coordinated with engine
25 overhaul." Id. Atwood recorded, "The only problem is that
26 Powerhouse Diesel Engine Services was not at this meeting and not
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1 part of the discussion. Powerhouse position since vessel arrival at
2 the shipyard is that Cascade General cannot be working in the
3 engine room at the same time that they are working in the engine
4 room." Id.

5 As Atwood recorded, and as other witnesses testified, no
6 representative of Powerhouse was present at the meeting, and there
7 is no evidence that AMHS or Cascade informed Powerhouse of the
8 results of the meeting after it occurred. Atwood testified that
9 AMHS's position was that, as prime contractor, Cascade could
10 sequence the work to be done in the manner it chose.

11 AMHS's agreement on June 2, 2004, to allow Cascade to do
12 concurrent work in the engine room indicates that AMHS was
13 satisfied the decision to allow concurrent work would not increase
14 owner costs, negatively impact schedule, or compromise the main
15 engine work or sea trials if it was coordinated with engine
16 overhaul. Atwood's weekly report dated February 12, 2005, Exhibit
17 511, establishes AMHS's written approval of the concurrent work in
18 the engine room. But the evidence does not show that the concurrent
19 work Cascade intended to do in the engine room was ever coordinated
20 with the work of Powerhouse, the condition stated by Atwood on June
21 2, 2004. The court finds that the decision by Cascade and AMHS to
22 permit concurrent work in the engine room, and Cascade's failure to
23 coordinate its own work in the engine room with Powerhouse's engine
24 overhaul, had a negative impact on the efficiency of both
25 Powerhouse and Cascade, slowing both parties' main engine work,
26 ///

1 increasing costs, disrupting the schedule, and compromising the sea
2 trials.

3 On September 17, 2004, William Arthur, Powerhouse's project
4 manager, notified Byers that Powerhouse expected to start
5 disassembly on Monday, October 4. Exhibit 12.

6 The contract between AMHS and Cascade required that Cascade
7 perform the following pre-disassembly preparation:

8 remove all debris, dirt, oil, water and steam clean and
9 organize the engine areas in preparation for engine
10 disassembly. ... All fluid supply lines shall be closed
11 and locked to prevent opening. ... Main engine and engine
ancillary equipment shall be steam-cleaned and wiped to
remove all dirt, fuel, oil and residual water and
detergent.

12 Exhibits 4, 508, Section 3.6.3.2

13 In late September Paul LeMoine, Powerhouse's project engineer,
14 met with Kevin Atkinson, field machinist for Cascade, to discuss
15 interferences in the engine room that impeded Powerhouse's
16 disassembly work. LeMoine gave Atkinson a list of the
17 interferences, and said Cascade needed to remove them before
18 Powerhouse could begin the overhaul of the engines. LeMoine also
19 made a request to Atkinson that Cascade construct I-beams over the
20 engines to expedite removal of the heads from the engines.

21 On September 27, 2004, Arthur sent Byers an e-mail:

22 Attached is a listing of interferences that Paul
23 [LeMoine] has created in conjunction with Kevin
24 [Atkinson] from your office that we need removed to
provide access to our work on the main engines.

25 Exhibit 14. The interferences, which obstructed access to parts in
26 the engine room, included jacket water piping, crankcase vacuum fan
27 discharge piping, lube oil sump vent, fly wheel shrouding, inlet

1 air ducting to turbocharger, jacket water piping to intercoolers,
2 jacket water piping from intercoolers, strainers and piping to
3 check valves at engine headers, pump discharge piping, vibration
4 dampers, vibration damper jack shafts and couplings to crankshaft,
5 grating, and CO2 piping.

6 Cascade agreed to and did install the I-beams in October 2004.
7 See Exhibit 13. No invoice for the work was provided during this
8 time period. The record indicates that other interferences listed
9 by LeMoine and Atkinson gradually were removed by Cascade, but the
10 evidence does not show when the work was done. The installation of
11 the I-beams and the removal of other interferences was not invoiced
12 to Powerhouse until April 12, 2005, when Byers hand-delivered a
13 spreadsheet to Rick Jones. Exhibit 540.

14 Some interferences appear to have been removed by Powerhouse,
15 but reinstalled by Cascade, with Powerhouse being charged for the
16 reinstallation. See, e.g., Exhibit 145 (back charge for
17 installation of lube oil and water jacket piping after removal as
18 an interference by Powerhouse).

19 LeMoine arrived at the vessel in Portland on October 4, 2004.
20 At the time of LeMoine's arrival, the interferences listed by
21 LeMoine had not been removed and the I-beams were not yet in place.
22 Cascade had workers in the engine room, working on the saltwater
23 systems and the lube oil systems, which were in and around the
24 engines. The evidence establishes that with the exception of a two
25 week period in 2005, discussed below, Cascade performed its own
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1 work concurrently with Powerhouse in the engine room during the
2 entire time Powerhouse was overhauling the engines.

3 On October 7, 2004, Byers sent an e-mail to Arthur and to Jim
4 Jones, saying,

5 [W]e need to discuss support costs. To date, Cascade has
6 completed steam cleaning of the engines, lube oil
7 analysis, and we are in the process of installing
8 temporary lifting beams above each bank of engine heads.
9 These services are being provided at the request of your
10 on-site foreman.

11 Exhibit 13.³ Cascade continued its work in the engine room through
12 October, including taking up deck plating and doing saltwater
13 piping work forward of the engines. The saltwater piping work and
14 the absence of the deck plating made it difficult for Powerhouse
15 workers to get access to the engines, or to stand near or walk
16 around them.

17 On October 22, 2004, Byers sent Arthur an e-mail, saying,

18 [b]ased on your production schedule, disassembly of the
19 engines is to be complete by 10/29/04. We have scheduled
20 main reduction gear work ... to start on 11/1/04. There
21 can be no other work in the general vicinity of the main
22 reduction gears while this work is ongoing. ... Please
23 provide a schedule for your in shop work so that we can
24 schedule AMHS and Cascade General Inspector visits.

25 On October 26, 2004, Arthur responded with an updated schedule
26 showing disassembly completed on November 12, with post disassembly
27 inspections during the week of November 14. Id.

28 ³ This e-mail is somewhat ambiguous; it suggests that steam
cleaning of the engines and lube oil analysis, as well as I-Beam
construction, are being done at the request of Powerhouse's
foreman, LeMoine, and that Powerhouse will be charged for them,
but steam cleaning the engines was Cascade's contractual
responsibility. Exhibits 4, 508, Section 3.6.3.2.

1 On November 5, 2004, Atwood submitted a weekly construction
2 report. Atwood noted that Powerhouse's revised schedule showed
3 disassembly ending on November 12, but that "as of today,"
4 Powerhouse had not started on removal of piston liners, main
5 bearing caps, front gear case and cam shafts. Atwood wrote,

6 It appears that at the present rate of production that
7 Powerhouse onsite team will be working all the way
8 through December on disassembly and onsite inspection
9 prior to start of reassembly (2 ½ months for disassembly
10 and preliminary inspection vice [sic] the original 4
11 weeks shown in Powerhouse schedule). In is normal [sic]
12 that reassembly of engine will take 2 to 3 times that was
13 required [sic] for disassembly.

14 On November 8, 2004, Byers wrote a letter to Jim Jones to
15 express concern about Powerhouse's "lack of progress to date" on
16 the engine overhaul. Exhibit 17. The letter continued,

17 As explained during pre-award phone conferences, Cascade
18 General has numerous work items in close proximity to the
19 main engines that we plan on completing during the eight
20 week demobilization period.

21 Exhibit 17. Byers testified that he was concerned because
22 Powerhouse's revised schedule had cut the demobilization period
23 from the original eight weeks down to four, thereby affecting work
24 in proximity to the engines that Cascade had scheduled during
25 demobilization.

26 Powerhouse did not staff the engine overhaul at the levels
27 necessary to complete the disassembly on schedule. In part,
28 Powerhouse's understaffing of the project was due to Cascade's
conduct in restricting Powerhouse's access to the engines and
limiting Powerhouse's work space; under such conditions, adding

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1 more people to the engine room would not necessarily have increased
2 Powerhouse's efficiency.

3 In November 2004, Cascade was still working on piping in the
4 engine room. Cascade had also taken up deck plates; cordoned off
5 some areas of the engine room, making them inaccessible to
6 Powerhouse; restricted clearances, so as to hinder or prevent
7 Powerhouse employees from obtaining access to the engines;
8 installed plastic ducting over parts of the engines; draped air
9 hoses over the engines; and erected staging that blocked
10 Powerhouse's access to the main deck from the engine room.

11 LeMoine complained on many occasions to Byers, Atkinson and
12 Mike Nutter, a supervisor assigned to the project, about
13 Powerhouse's restricted access to the engines. According to Cascade
14 employee Atkinson, Powerhouse complaints about lack of access to
15 the engine room were "almost an everyday occurrence," that
16 eventually became "a big joke." Tr. 468:20-569:9. According to
17 Atwood's testimony, Cascade's work on shaft bearing and seal
18 overhaul, CPP systems, engine room systems modifications, and main
19 engine exhaust systems modifications⁴ were all done at the same
20 time as the main engine overhauls.

21 On November 11, 2004, Arthur noted Byers' concerns with the
22 project schedule and Powerhouse's low levels of manpower at the
23 site, but said,

24 Your contract with the State ... states that "Two
25 mutually exclusive, non-concurrent Work Groups are

26 ⁴All tasks identified in the subcontract as Work Group 2
27 items.

1 established;" it also states that "The time frame for
2 main engine overhaul and foundation inspections described
3 in Section 3 of these specifications shall be separate
4 and distinct from the Engine Room systems work..." Based
5 on delay reports and daily reports received from our
6 Field Service director Mr. Paul LeMoine, Cascade General
has not provided Powerhouse with unencumbered access to
the engine room during our disassembly process and has in
fact been performing the "Engine Room systems work"
concurrently with our "Main Engine Overhaul," which is
contrary to the requirements of the specifications.

7 To date we have documented delays of over ten days
8 specifically related to the lack of unencumbered access
9 to the engines. These delays have cost Powerhouse
considerably in both labor and expenses for which we will
be submitting a detailed accounting... upon completion of
the disassembly phase.

10 Exhibit 20. Arthur complained in the same e-mail about Cascade's
11 late payment of Powerhouse's first invoice. Id. On November 16,
12 2004, Arthur reiterated his complaints to Byers about Powerhouse's
13 lack of unencumbered access to the engine during disassembly
14 because of the concurrent work being done by Cascade. Exhibit 524.

15 At the end of November 2004, Powerhouse requested additional
16 time to obtain parts and do extra work. The deadline for engine
17 commissioning was extended to March 15, 2005, with a vessel sailing
18 date of April 15, 2005.

19 Powerhouse's inspections after disassembly resulted in
20 purchase requests in December 2004, January 2005, and February
21 2005, for additional material and labor, including 16 connecting
22 rods, to be replaced for \$296,000; block milling, which increased
23 labor cost by \$160,000; four intercoolers, to be replaced at a cost
24 of \$32,000 each; piston assemblies, which added \$313,600 in
25 materials costs; repair of one rocker arm and shaft, for an
26 additional \$7,380 in labor and materials; replacement of exhaust
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1 manifolds, for an additional labor cost of \$164,000; replacement of
2 sub covers, for an additional cost of \$108,800; repair of crankcase
3 doors and cam door threaded holes on the engine block, for an
4 additional cost of \$13,050; additional turbocharger parts, beyond
5 those specified in the contract, for an additional \$19,648 in
6 materials; upgraded fuel tappets, for an additional \$52,800 in
7 materials cost; replacement of six intermediate push rods and 20
8 intake exhaust push rods, at a cost of approximately \$16,000;
9 replacement of fuel pump pin and deflectors, at an increased
10 material cost of \$15,360; fuel pump base modification, for an
11 increased labor cost of \$4,000; and overhaul of vibration dampers,
12 which increased labor and materials costs by \$46,848. Exhibit 7.
13 AMHS agreed to change orders for this work.

14 The original subcontract amount with Powerhouse was
15 approximately \$1.4 million. The change orders added approximately
16 another \$1.2 million to Powerhouse's contract. The cost of the
17 change orders and the terms under which the work was to be done was
18 settled between Cascade and AMHS; the need for the change orders
19 was not disputed.

20 The work plan for the engines required that after disassembly,
21 Powerhouse would clean the engines and prepare them for reassembly;
22 inspect the engine blocks and the materials and parts that were
23 left on the vessel; and recondition in its shop the so-called Part
24 B items that had been removed from the vessel.

25 Byers asked AMHS for a one week extension of the contract, to
26 which AMHS agreed. As a result of this extension, the schedule was
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1 modified on December 2, 2004, to show reassembly beginning in mid-
2 December and completed by March 8, with testing in the following
3 weeks. Exhibit 539.

4 On December 3, 2004, Byers sent an e-mail to Arthur, accepting
5 Powerhouse's proposal that the reassembly schedule be moved out to
6 incorporate change work, the two to three weeks necessary for block
7 machining, and the Christmas holidays. Exhibit 23. Arthur had
8 proposed that the block machining be scheduled for a time after
9 Cascade had completed piping and structural work between and around
10 the main engines. Id. Byers agreed to provide a purchase order and
11 down payment for connecting rods and block machining by December
12 10, 2004, followed by a purchase order and down payment for all
13 other new work recommended in Powerhouse's inspection report dated
14 November 29, 2004, by December 17, 2004, in return for Powerhouse's
15 completing reassembly of the main engines and having them ready for
16 testing on or before March 8, 2005. Exhibit 525.

17 In January 2005, Cascade set up a plastic barriers as a
18 containment area around the engines to prevent contamination from
19 welding and grinding, to provide ventilation so that engine
20 assembly and pipe fitting work could happen simultaneously, and to
21 separate Cascade and Powerhouse work crews from each other. The
22 plastic barriers created additional difficulty with access to the
23 engines. Powerhouse complained to AMHS's Atwood about crowding in
24 the engine room and possible contamination from airborne material
25 generated by Cascade's pipe fitting activity. Atwood referred
26 Powerhouse to Cascade.

1 On January 24, 2006, after a meeting with Cascade, Powerhouse
2 provided another updated schedule, which showed 14 people on site
3 for reassembly. At a "50% meeting" in January, Jim Jones met with
4 Cascade, AMHS, and other subcontractors, to discuss the fact that
5 Powerhouse was behind schedule. Jones complained that it was
6 impossible to hold the schedule because Powerhouse had never been
7 given the work environment it needed. According to Jones, at about
8 the time of the 50% meeting, the block machining was ongoing, the
9 gratings were pulled up, piping and people were everywhere, and it
10 was "chaotic and a disorderly mess." Tr. 1144:7.

11 On January 25, 2005, Byers sent an e-mail to Arthur,
12 requesting that he confirm the shift schedule and work hours per
13 day on which the January 24 schedule revision was based, and that
14 he also confirm that there were no delivery problems. Exhibit 528.
15 Arthur responded that the shift schedule for both crews was 12
16 hours a day, seven days a week, involving two crews of six, each
17 with a lead mechanic and with LeMoine overseeing the reassembly for
18 both engines. Id. Arthur confirmed that no material delivery
19 problems were anticipated. Id. However, Powerhouse was already
20 behind on main engine block cleaning. Scheduled to be finished by
21 January 27, 2005, the work was not begun until January 28, 2005.

22 On January 31, 2005, Dave Whitcomb, a project manager for
23 Cascade assigned to the project for four to five weeks in January
24 and February, sent an e-mail to Byers saying, "Based on the
25 schedule that you gave me, it appears that we may be slipping
26 behind on reassembly. There are additional people today, but it
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1 does not look like they [Powerhouse] were ready for the additional
2 personnel and do not have the work lined out for them. ... It
3 appears to me that the schedule was not communicated to the people
4 here." Exhibit 28.

5 The rebuilding of the engines was further hindered by
6 LeMoine's absence from the vessel for the period between January
7 23, 2005 and February 6, 2005. Powerhouse fell behind its published
8 schedule in starting installation of the engines.

9 On February 1, 2005, Cascade pulled all of its personnel out
10 of the engine room for two weeks. Exhibit 31. Except for this two
11 week period, Cascade crews had worked in the engine room
12 concurrently with Powerhouse, and on at least two occasions in
13 November 2004, Cascade had ordered Powerhouse to be "out of the
14 way" while it did its engine work. Despite the absence of Cascade
15 personnel on February 1, 2005, Whitcomb noted in his journal that
16 Powerhouse crews worked only an eight hour shift that day, and
17 LeMoine was not there. Exhibit 31. Engine reassembly was not
18 started. Id.

19 On February 1, 2005, Byers sent an e-mail to Arthur, noting
20 that essential parts, including connecting rods and liner inserts,
21 and key personnel, including project engineer LeMoine and a second
22 lead mechanic, were not onsite. Exhibit 13. Byers wrote that
23 Powerhouse's ability to complete reassembly by March 8, 2005 was a
24 major concern, particularly since the connecting rods and piston
25 assemblies, being manufactured in Denmark, had not yet left the
26 manufacturer's facility even though they needed to be onsite by
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1 February 6, 2005, to support Powerhouse's schedule. Id. Byers noted
2 further that the castings for the first set of the new sub covers
3 had been rejected, although they had to be onsite by February 20,
4 2005 to support Powerhouse's schedule. Id.

5 Jim Jones acknowledged in his testimony that the third party
6 to which Powerhouse had subcontracted the machining of the liner
7 inserts took three weeks to do the job instead of the anticipated
8 10 days. Jones testified that the engine could not be reassembled
9 until the machining was done and the liner inserts put into the
10 engine blocks. While the concurrent engine room work created
11 problems for timely completion of the work, Powerhouse had other
12 issues like these, which were independent of the concurrent work
13 and resulted in Powerhouse missing its deadlines.

14 On February 2, 2005, Whitcomb observed that although Cascade
15 was out of the engine room, Powerhouse worked only an eight hour
16 shift. Exhibit 31. No engine reassembly had started because the
17 engines were not clean. Id. On February 3, 2005, Whitcomb recorded
18 in his log that Cascade still was not working in the engine room,
19 but Powerhouse personnel did not arrive until after noon. Id.
20 During that afternoon, Powerhouse continued cleaning the engines,
21 but no work was accomplished on reassembly. Id. On February 4,
22 2005, Whitcomb recorded that Cascade remained out of the engine
23 room and Powerhouse performed final vacuuming on the starboard main
24 engine and made preparations to lift the forward main bearing. Id.
25 Whitcomb testified that installation of the bearings was the first
26 task required in reassembling the engines.

1 On February 6, 2005, Whitcomb wrote that Powerhouse continued
2 to work on the engine bearings; at this point Powerhouse was
3 approximately a week behind on main bearing installation, which was
4 to have been done by January 31, 2005. Exhibit 31. LeMoine had not
5 been onsite for technical guidance during installation of the
6 bearings. Id.

7 Whitcomb testified that the schedule called for Powerhouse to
8 install the liner inserts between February 2 and February 4, 2005.
9 As of February 5, 2005, only nine of 32 liner inserts were onsite,
10 and none had been installed. Atwood testified that in his opinion,
11 Powerhouse's lack of qualified engine overhaul personnel on site
12 was a major problem with the engine overhaul.

13 In February 2005, Cascade requested and received contract
14 extensions from AMHS that moved the vessel's departure date from
15 the shipyard to April 28, 2005. AMHS did not assess penalties or
16 costs against Cascade for any of the extensions, and did not impose
17 liquidated damages on Cascade for the delays. All of the extensions
18 granted by AMHS added five weeks to what had originally been bid as
19 a seven month job.

20 Cascade returned its personnel to the engine room on or about
21 February 23, 2005. Despite the plastic barriers, Powerhouse
22 continued to express concerns about Cascade's grinding and welding
23 contaminating its work site.

24 Byers hired a consultant, Mike Hartwig of Advanced Engine
25 Technology Corporation (AETC), and asked him to visit the job site,
26 give his assessment of progress on the engine overhaul, and provide
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1 a plan for completing the work in the form of a schedule and
2 manpower plan. AETC recommended a schedule and manning plan that
3 were essentially the same as Powerhouse's schedule and manning plan
4 of January 24, 2005, Exhibit 36, but Powerhouse never met its
5 manning schedule.

6 On March 1, 2005, Powerhouse notified Cascade that its
7 supplier was unable to meet the delivery date for the intercoolers,
8 so that they would not be on the job site until the end of April.
9 According to the testimony of D'Isabella Lee, Powerhouse vice-
10 president, Powerhouse had already received a down payment on the
11 intercoolers of approximately \$25,000. Byers cancelled Powerhouse's
12 purchase order for the intercoolers and ordered them directly from
13 Thermal Engineering, the same vendor Powerhouse had been using.
14 Cascade and Powerhouse agreed that Powerhouse could have the profit
15 it would have realized from the sale of the intercoolers if
16 Powerhouse completed main engine reassembly on schedule. Exhibit
17 176. That schedule was not met. The intercooler delivery issue is
18 another example of a failure to perform by Powerhouse that was not
19 related to concurrent engine room work. However, the failure to
20 meet the reassembly schedule was in part a result of the concurrent
21 work.

22 On March 3, 2005, Arthur sent an e-mail to Byers requesting a
23 contract extension. Exhibit 32. On March 9, 2005, AMHS granted
24 another extension, and the date for the vessel's delivery was moved
25 out to April 28, 2005.

26 On March 3, 2005, and again on March 10, 2005, Byers
27

1 complained to Powerhouse that it was not allocating sufficient
2 manpower to support the contract milestones. Exhibits 33, 34. Byers
3 demanded that Powerhouse increase its allocation of resources to
4 reflect the manning levels outlined in the current production
5 schedule, no later than March 12, 2005; if Powerhouse failed to do
6 so, Cascade would supply marine mechanics and riggers who would
7 work under Powerhouse's project engineer. Exhibit 34. During
8 reassembly, Powerhouse did increase its man hours to the 80-100
9 hours per day range, even though Cascade continued to work in the
10 engine room doing pipe work, welding, grinding, and cutting.

11 On March 5, 2005, Whitcomb visited Powerhouse's shop in
12 Benicia, California, to evaluate Powerhouse's refurbishment
13 efforts. The schedule called for installation of the cylinder heads
14 on both engines by February 21; on March 5, 2005, Whitcomb observed
15 that 16 of them were still onsite at Benicia. Whitcomb learned from
16 Arthur that the vibration dampers were still in a machine shop in
17 the Bay Area. Although the turbochargers were scheduled to be
18 installed by March 2, 2005, as of March 4, 2005, they were "in
19 pieces" in Powerhouse's shop in Benicia. Whitcomb observed that of
20 the 16 fuel pumps per engine, only five were assembled.

21 On April 4, 2005, Jim Jones wrote a letter to Byers in which
22 he acknowledged Powerhouse's responsibility for having the engines
23 assembled and ready to start on April 14, 2005, but which also drew
24 Byers' attention to the contractual provision of two mutually
25 exclusive, non-concurrent work groups. Exhibit 38. Jones also
26 wrote:

1 We acknowledge that Cascade has provided outstanding
2 support for the coordination of the work within the
3 engine room. Regardless, no amount of coordination can
4 lessen the impact to our work flow caused by missing deck
5 plates, barriers and curtains, welding and grinding
6 activities, and all the other associated encumbrances
7 realized when two companies attempt to perform so many
8 activities in such a confined area.

9 Id.

10 Atwood has testified that during April 2005, Cascade and
11 Powerhouse were both trying to work in the engine room, and that
12 crowding made production low. On April 18, 2005, Mark Perez, a
13 federal inspector reporting to Atwood, observed that there were too
14 many people in the engine room and not enough supervision of the
15 engine room by Cascade; Perez testified that his concern was
16 safety.

17 Atwood testified that toward the end of the job, the engine
18 room was "at a massive panic overload," Tr. 639:1 and
19 "astronomically crowded." Tr. 639:4. Atwood explained that at the
20 time, numerous vendors and subcontractors were working in the same
21 space at the same time. He estimated that at least 20 people were
22 working in the engine room.

23 Lance Block, a self-employed mechanical engineer who provided
24 services to Powerhouse and assisted with final assembly of the
25 engines, testified that he went into the engine room in April 2005
26 and was "rather shocked" by the conditions he found. Tr. 995:11-14.
27 Block testified that the "most distressing" thing was that when he
28 walked into the engine room, there were fluids coming down from
overhead, "just running all over my shoulders." Tr. 995:21-23.

1 These fluids were from Cascade's steam cleaning work somewhere
2 overhead. Block said that normally, when engine systems are open,
3 attempts are made to keep foreign material out of the systems.

4 Block also observed that parts were not staged directly in the
5 work area that was allocated to Powerhouse; instead they were
6 scattered throughout the car deck.

7 On April 17, 2005, Byers sent an e-mail to Jim Jones. Exhibit
8 82. The e-mail stated that Cascade would "continue to provide labor
9 and material assistance, as requested, to support completion of the
10 Main Engine work." Id. Attached to the e-mail was a spreadsheet
11 showing charges for support Cascade had provided to Powerhouse
12 through April 14, 2005. Id. Byers made a note on the spreadsheet
13 that he had handed it to Rick Jones, vice president of Powerhouse,
14 on April 12, 2005. Total back charges at that time were \$149,982.
15 Exhibits 540, 81.⁵

16 Although Powerhouse had incurred back charges since October
17 2004, Cascade had not invoiced Powerhouse for these charges or
18 otherwise notified Powerhouse of what charges had been incurred,
19 until Byers provided the April 2005 spreadsheet. LeMoine testified
20 that he had no understanding of how Cascade was charging for
21 removal of interferences and assistance, and that although LeMoine
22 asked Cascade how he was supposed to keep track of the service
23 charges, he was never shown any invoices for the work. LeMoine

24
25 ⁵ The parties use the terms "support charges," "support and
26 assist charges," and "back charges" interchangeably to indicate
27 charges incurred by Powerhouse for work performed by Cascade on
28 Powerhouse's behalf. The court refers to these charges as back
charges.

1 testified that Byers told him he was tracking the hours, but
2 LeMoine never saw any accounting of the charges.

3 Jim Jones, Rick Jones's brother and the president of
4 Powerhouse, responded to the spreadsheet as follows:

5 It has been agreed that there will be no back charges or
6 liquidated damages accrued against Powerhouse by Cascade
7 due to the enormous amount of ongoing concurrent work.
8 The April 14 start-up date deadline for both engines has
9 been waived by Cascade due to this concurrent work
effort, and Powerhouse as well as Cascade are working
together day to day on assuring the vessel leaves the
yard by the 25th, or the latest the 26th of April, for
delivery to Bellingham on the 28th of April.

10 Exhibit 540. In his response to this e-mail, Byers did not take
11 issue with Jones's assertion that there would be no back charges;
12 Byers said only that liquidated damages would be assessed if the
13 vessel were not delivered to AMHS by April 28, 2005. Id.

14 Jim Jones testified that he believed Cascade had agreed that
15 there would be no back charges based on the statement by Byers
16 that, if the ship left on time, "all this goes away." Tr. 1151:15-
17 17. But at the end of April, Byers suddenly stopped approving
18 Powerhouse's invoices. Byers' stated reasons to Jim Jones were that
19 Cascade still did not know whether AMHS would impose liquidated
20 damages and because Powerhouse owed Cascade money for the back
21 charges. Jones testified that Byers did not tell him that
22 Powerhouse owed Cascade more in back charges than Cascade owed
23 Powerhouse on its invoices.

24 Until late April, Cascade had been paying Powerhouse's
25 invoices, withholding five percent against warranty work. At trial,
26 Byers's testimony was that Cascade stopped paying Powerhouse's
27

1 invoices for two reasons: first, because Cascade concluded that the
2 work represented on Powerhouse's invoices was not complete, and
3 second because by late April, Cascade's back charges exceeded the
4 amount due on Powerhouse's invoices. This explanation conflicts
5 with Byers's explanation to Jim Jones for not paying Powerhouse's
6 invoices, and with Byers's tacit acceptance of Jim Jones's e-mail
7 stating his understanding that the back charges would "go away" if
8 the vessel left on time.

9 At trial, Byers was unable to specify any work invoiced by
10 Powerhouse that was not completed. He confirmed that Cascade did
11 not pay an invoice dated March 28, 2005, in the amount of \$14,400
12 for eight fuel injection pumps, even though the eight pumps were
13 shipped, delivered and installed in the engine. Byers confirmed
14 that Cascade did not pay another invoice, also dated March 28,
15 2005, for viscous dampers, even though the dampers were delivered
16 to the vessel and installed. Id. Byers confirmed that Cascade did
17 not pay a third invoice, also dated March 28, 2005, in the amount
18 of \$61,500, for exhaust manifold assemblies, even though they, too,
19 were delivered and installed on the vessel. Id. Byers acknowledged
20 that all the parts on the unpaid invoices were actually delivered
21 and installed.

22 The court finds Byers's testimony that Cascade's failure to
23 pay Powerhouse's invoices after the end of April 2005 was because
24 the work represented on the invoices was incomplete not credible.

25 On April 25, 2005, three days before the vessel was scheduled
26 to leave the shipyard, and during initial engine testing, the
27

1 starboard main engine (SME) was run for two to three minutes. The
2 SME's lube oil pump (LOP) overheated. The engine was shut down and
3 the LOP was removed and sent to Cascade's machine shop for
4 inspection and repair. Cascade's machinists concluded that the
5 bearing clearances were too tight and corrected them.

6 When the SME LOP was reinstalled, it overheated again. The SME
7 was shut down again and the LOP removed. The suspected cause was
8 lack of lubrication. According to Jim Jones, Powerhouse's opinion
9 was that a check valve which had been installed on the discharge
10 side of the LOP at the request of AMHS was prohibiting oil flow.
11 Cascade removed the check valve; afterwards, the pump ran within
12 normal temperatures. I conclude that these check valves required by
13 AMHS were the cause of the LOP overheating issues.

14 When the port main engine (PME) was tested, it made an
15 uncharacteristic noise. The PME LOP was removed and sent to
16 Cascade's machine shop. When the LOP was taken apart, it appeared
17 to have been run dry; the inside of the pump was free of oil. After
18 the same check valve was removed from the PME LOP, the noise
19 stopped. The PME LOP did not overheat.

20 On April 27, 2005, Jim Jones sent an e-mail to Byers:

21 Powerhouse strongly recommends that the Lube Oil Pumps on
22 both engines be removed and inspected and/or repaired as
23 necessary, prior to the departure of the vessel for Sea
24 Trials or conducting load tests at the dock. The recent
25 check valve modification to the L.O. discharge piping has
26 caused one outright failure and one serious overheating
27 of the SME pump and the PME pump was emitting loud
rattling noises which were not at all typical for this
series of pump. We are not condemning either pump
outright but can in no way guarantee performance nor
warranty failures of any nature during the sea trials or
the normal operating season without removal and

1 inspection/repairs as noted above. ... Any costs
2 associated with the removal, repair, transportation,
3 installation of the M/E LOPs are not the responsibility
4 of Powerhouse. ...

5 Cascade forwarded this e-mail to Atwood, but because of time
6 constraints, Atwood decided on behalf of AMHS to run the pumps as
7 they were.

8 Cascade continued to work on the vessel through April 28,
9 2005, the day the ship was scheduled to sail, including working on
10 the sprinkler system and the fuel oil system. Meanwhile, on April
11 27, 2005, Byers sent an e-mail to Jim and Rick Jones saying that
12 during regular maintenance checks in the engine room, the ship's
13 crew had found metal shavings in the LOP suction strainers. Exhibit
14 83. Byers testified that the contamination was cleaned up on April
15 29 or 30, 2005.

16 The vessel did not depart the shipyard until April 30, 2005.
17 Because of the rushed schedule, and on AMHS's orders, the vessel's
18 engines were not put through a full test before departing from the
19 shipyard. During sea trials, the vessel developed problems with the
20 air start valves and valve thrusters. The vessel put in at Astoria.
21 Powerhouse retorqued all of the air start valves and replaced some
22 of them. Powerhouse crews on board the vessel repaired items on a
23 punch list of warranty items that the ship's crew had prepared.

24 On May 2, while the vessel was underway to Bellingham,
25 Washington, the SME lost lube oil pressure. The problem was not
26 reported by the crew. Instead, the crew continued to run the engine
27 until it shut down. The vessel continued to Bellingham using the
28 electric drive LOP.

1 The vessel remained in Bellingham until May 7, 2005, after two
2 or three attempts at a sea trial. In Bellingham, the SME LOP was
3 removed and it was discovered that the shaft was sheared off and
4 the gear train was misaligned. On May 4, 2005, Arthur wrote to
5 Byers with a recommendation that, because it would otherwise be
6 impossible to determine the internal damage caused by the sheared
7 shaft, the gear case cover needed to be removed, an inspection made
8 of all "gears, backlash, bushings, oil supply lines, etc.," the
9 gaskets and seals disturbed by the inspection be replaced, the gear
10 case cover be replaced, and a new LOP be installed. Exhibit 547.

11 Jim Jones testified that this would have been a four to five
12 day job. But by this time, ticketed passengers were waiting for the
13 vessel. AMHS decided not to follow Powerhouse's recommendation.
14 Mike Hartwig, who was at that time working on the vessel as a
15 technical consultant, had opined that the gears would probably get
16 the vessel through the run season.

17 On May 5, 2005, Arthur sent an e-mail to Atwood stating that
18 Powerhouse would not accept any responsibility for any damages or
19 loss of operational integrity due to the failure to follow its
20 recommended procedures. Exhibit 548.

21 Byers had asked Powerhouse to provide a replacement SME LOP.
22 Powerhouse refused to provide a new pump at its own expense because
23 Cascade had not paid its outstanding invoices, and because AMHS had
24 gone against Powerhouse's recommendations. Eventually the State of
25 Alaska gave Powerhouse a purchase order for a replacement pump.
26 Powerhouse provided the pump and flew it to Bellingham. The new
27

1 pump arrived in Bellingham on May 5, 2005.

2 Cascade modified the adapter plate on the gear case of the SME
3 LOP without removing the gear case, as an alternative to
4 Powerhouse's recommendation, and installed the SME LOP in the early
5 morning hours of May 6, 2005. A sea trial was attempted, but lube
6 oil pressure was found to be low. Eventually this problem was
7 traced to a broken lube oil main bearing tube.

8 The vessel departed Bellingham for Alaska, arriving in
9 Ketchikan on May 9, 2005.

10 On May 18, 2005, AMHS sent a letter to Byers notifying Cascade
11 that the work performed on the M/V Columbia had been determined to
12 be defective and enclosing a list of known deficiencies as of that
13 date. Exhibit 809. From this list, the letter noted that there were
14 "two critical items on this list that require prompt action to
15 correct," a jacket water leak in the PME inboard exhaust manifold,
16 and a broken SME supply fuel oil regulator valve. Id.

17 Byers testified that the new exhaust manifolds had been
18 provided by Powerhouse, and that they had developed an internal
19 leak; in his opinion, Powerhouse was contractually required to fix
20 that problem. According to Byers, Powerhouse sent a worker to the
21 site, but the worker was not prepared to complete the repair
22 because he did not have tools and materials. Byers testified that
23 Cascade did the repair, with Powerhouse providing a schematic of
24 the exhaust manifolds.

25 Byers testified that the broken SME supply fuel oil regulator
26 valve was also an item that had been subcontracted to Powerhouse;

1 Byers did not recall whether Powerhouse fixed that problem.

2 On May 20, 2005, Diehl Engineering was brought on board the
3 vessel as a consultant to inspect the gears on both engines.
4 According to Diehl's report, the SME LOP drive gear showed pitting
5 and wear not expected after 100 hours of operation. On September
6 23, 2005, Jim Jones confirmed that, although the subcontract called
7 for a new gear, the gear was not new; rather, it was an old gear
8 that had been reconditioned by Powerhouse. Powerhouse did not
9 invoice Cascade for the reconditioned gear. In October 2005,
10 Cascade purchased a new drive gear from Cooper Compression for
11 \$21,316, and installed it under the direction of AETC.

12 On May 25, 2005, AMHS issued a notification of deficient
13 workmanship to Cascade, stating that the SME LOP drive and gears
14 had been "determined to be defective and must be replaced," due to
15 serious angular misalignment and deterioration of gear teeth. AMHS
16 also notified Cascade that the LOP adapter plate that Cascade had
17 modified, in order to allow the LOP to operate with misaligned
18 drive gears, would have to be replaced. Exhibit 91. This
19 modification appears to have been done to get the drive gear
20 aligned. It is unclear whether the modification was necessitated by
21 Powerhouse's use of a reconditioned, rather than new, drive gear.

22 In May, June and July 2005, Byers, Arthur and Jim and Rick
23 Jones had a series of conversations and meetings to discuss the
24 back charges. On May 20, 2005, Cascade provided Powerhouse with a
25 revised spreadsheet showing back charges. Exhibit 39. The May 20
26 spreadsheet showed back charges in the amount of \$398,183. At that
27

1 time, Powerhouse's outstanding unpaid invoices to Cascade totaled
2 \$336,404. Jim Jones testified that he objected to many of the back
3 charges, and provided the details of some of his objections to the
4 charges on Exhibit 566. The parties were unable to reach an
5 agreement on the back charges.

6 On July 25, 2005, Atwood sent an e-mail to Byers, reporting
7 several ongoing problems, including 1) a leak in the PME inboard
8 exhaust manifold; 2) a broken main engine exhaust valve spring; 3)
9 leaking rocker assembly shafts; and 4) misalignment of the rocker
10 shaft dowels. Exhibit 104.

11 Although Powerhouse undertook to replace all 128 of the valve
12 springs, it only provided 64. Powerhouse witnesses testified that
13 the reason only half of the valve springs were sent was that the
14 new valve springs were sent on condition that Cascade return the
15 old springs so Powerhouse could determine whether it had a claim
16 for them against its vendor. Because Powerhouse did not receive the
17 old valve springs from Cascade, and because Powerhouse was in a
18 dispute with Cascade about the back charges, Powerhouse did not
19 ship the second 64 valve springs and did not invoice Cascade for
20 them. Eventually, Powerhouse sent the valve springs directly to
21 AMHS. Powerhouse re-machined the rocker arms.

22 On June 28, 2005, Powerhouse notified Cascade that no warranty
23 items or replacements for borrowed items would be provided until
24 all financial issues were resolved to the satisfaction of Cascade
25 and Powerhouse. Exhibit 181. Jones added that the "anticipated
26 completion of this task" was July 8, 2005. Id. In response, Atwood
27

1 sent an e-mail to Byers stating that the delay in addressing main
2 engine warranty items or replacement for borrowed items until after
3 July 8, 2005 was "unacceptable." Id.

4 On September 21, 2005, AMHS sent another letter notifying
5 Cascade that the SME LOP pump drive and gears had been determined
6 to be defective and "must be replaced." Exhibit 118. Byers
7 testified that he forwarded the letter to Powerhouse for action.

8 On September 30, 2005, Arthur sent an e-mail to Byers, saying
9 that Powerhouse had determined that it would not accept
10 responsibility for the repair of the damaged LOP and its drive
11 components because of the "failure to follow our recommendations
12 during [the vessel's] initial operation and subsequent failure in
13 April..." Exhibit 123. Arthur wrote that after the two overheating
14 events, Powerhouse had notified Cascade and AMHS in writing on
15 April 27, May 4, and May 5, 2005, that the pumps should be removed,
16 inspected and repaired prior to the departure of the vessel for sea
17 trials; that Powerhouse crews were standing by on the vessel to
18 perform this work; and that the costs of the repair would be
19 forwarded to Cascade. Id. Arthur stated that the State of Alaska
20 "chose schedule over safety and made the decision to run the
21 vessel," without removing and inspecting the pumps. Id.

22 On October 10, 2005, Byers inquired about whether Powerhouse
23 would finish incomplete work items, as opposed to warranty work.
24 Exhibit 124. Jim Jones responded that Powerhouse would not honor
25 warranties on items that Cascade repaired and installed, or on
26 "anything that the State of Alaska arbitrarily operated after ...

1 warnings from Powerhouse not to do so." Id. Jones stated that the
2 only warranty outstanding was the valve springs, which Powerhouse
3 had shipped to AMHS at no charge the previous week. Id. Jones
4 challenged the accuracy of the task list, stating that many of the
5 items had already been completed, while others were not Powerhouse
6 responsibilities. Id.

7 On October 11, 2005, Byers asked Arthur and Jones to provide
8 an action plan for completing each outstanding work item on the
9 list; otherwise, Cascade would take action to complete the work and
10 back charge Powerhouse for all associated costs. Arthur responded
11 that no further work would be performed by Powerhouse, and no parts
12 or components would be supplied, "until the ongoing legal
13 proceedings have been completed." Id.

14 On October 14, 2005, Byers sent an e-mail to Arthur and Jim
15 Jones:

16 You have refused to complete warranty work on the M/V
17 Columbia to replace defective materials, to correct
18 deficient workmanship and to complete work tasks in
19 accordance with our contract. As a result, Cascade
20 General is taking action to complete a portion of your
21 outstanding warranty items. The work will be completed
22 next week and will include the replacement of the
23 defective Main Engine cylinder head valve springs and
24 work to correct deficiencies associated with the Main
25 Engine control air tubing. Other outstanding Powerhouse
26 work from the AMHS "Punch List" dated July 14, 2005 may
27 also be completed as time allows. Our estimated costs for
28 completing this portion of Powerhouse's outstanding work
is \$43,285. This estimate does not include the cost of
new valve springs or AMHS costs, if any. The actual cost
of the work will be forwarded for your information as
soon as possible after the work is complete. We have set
up an account to collect costs for this project. All
costs associated with this work will be billed to
Powerhouse Diesel Services. ...

1 Exhibit 127.

2 On January 19, 2007, AMHS provided Cascade with a punch list
3 of items for the main engines that were still not completed.
4 Exhibit 185. The items, which Cascade contends were the contractual
5 responsibility of Powerhouse, included priming and painting the
6 engines, return of main engine parts borrowed from the ship,
7 inspection and overhaul data for both engines, and ABS
8 certifications for main engine components. Id.

9 The state of Alaska has withheld \$249,639.09 from Cascade for
10 work on the vessel that remains undone, but has not imposed
11 liquidated damages or other penalties on Cascade. The contract
12 between AMHS and Cascade has not been closed.

13 **Conclusions of Law**

14 The parties agree that the law applicable to this case is the
15 law of Oregon.

16 Cascade has alleged two claims: 1) breach of contract for
17 Powerhouse's failure to complete the contracted-for work on a
18 timely basis, provision and installation of defective parts,
19 failure to provide warranty work, and failure to perform work to
20 the standards of good ship building practice; and 2) breach of the
21 implied warranties of professional work and fitness for use.

22 Powerhouse has alleged five counterclaims: 1) breach of
23 contract for unpaid invoices; 2) breach of contract for encumbered
24 work space; 3) recovery in quantum meruit for the reasonable value
25 of work performed before April 28, 2005; 4) recovery in quantum
26 meruit for the reasonable value of work performed after April 28,

1 2005; and 5) declaratory relief that Powerhouse is not obligated to
2 Cascade for the amount of back charges Cascade claims.

3 A breach of contract claim requires 1) a valid contract
4 containing the terms claimed to be breached; 2) that the plaintiff
5 performed its obligations under the contract; 3) that the defendant
6 did not perform its obligations under the contract; and 4) that
7 plaintiff was damaged by the claimed breach. See, e.g., Northwest
8 Natural Gas Co. v. Chase Gardens, Inc., 333 Or. 304, 312 n. 3
9 (2002).

10 Cascade asserts that its nonpayment of Powerhouse's
11 outstanding invoices was not a material breach of the subcontract
12 because the unpaid invoices amount to less than 15% of the \$2.6
13 million subcontract, and because Powerhouse concedes that it owes
14 Cascade some amount for back charges, though it disputes the total.

15 Whether a breach is material is a question of fact if the
16 facts are disputed. DeVol v. Citizens' Bank, 113 Or. 595, 602
17 (1925). The court concludes that Cascade's failure to pay
18 Powerhouse's outstanding invoices after April 2005 was a material
19 breach. The court also concludes that Powerhouse's failure to
20 complete the contracted-for work on a timely basis and according to
21 the contract terms, was a material breach. The evidence shows both
22 Cascade and Powerhouse were responsible for delays and for each
23 party's difficulty in accessing the engine room. Powerhouse also
24 had problems with inadequate manning levels and late deliveries of
25 parts. Cascade was certainly one major cause of these problems with
26 its insistence on performing concurrent work in the engine room
27

1 during for all but two weeks of the time Powerhouse was
2 disassembling and assembling the engines. Powerhouse was another
3 significant cause of these conditions by not providing adequate
4 resources to complete its disassembly and reassembly work in a
5 timely fashion, failing to meet its own schedules, and not
6 providing crucial parts on time. Powerhouse's response to Cascade's
7 concurrent work in the engine room consisted primarily of
8 ineffectual complaints while simultaneously making unfulfilled
9 promises to complete the work on time. Further, the evidence shows
10 that Powerhouse and Cascade received extensions of the scheduled
11 dates for their performance from AMHS.

12 While both Cascade and Powerhouse were in breach, they each
13 elected to continue to perform the contract, however ineffectual
14 their performance was.

15 Cascade's claimed contract damages

16 Cascade claims the following damages.

- 17 1. \$580,066 in back charges. This amount represents the
18 amount stated on the May 20 spreadsheet, \$398,183, plus
19 additional charges.
- 20 2. \$113,300 for work left unfinished by Powerhouse and
21 finished by Cascade, including ABS documentation, the
22 cost of a sea trial, and parts borrowed from the vessel's
23 parts supply.
- 24 3. \$21,315 for the new SME LOP drive gear purchased by
25 Cascade from Cooper Industries.
- 26 4. \$117,500 as "future and unassigned" costs, including
27

possible liquidated damages and costs associated with contract extensions granted by AMHS.

5. \$358,132 in "impact damages."

6. \$29,942, representing the amount owed to one of Powerhouse's subcontractors, Vanport

Powerhouse's claimed contract damages

Powerhouse claims the following damages:

1. \$336,404 in unpaid invoices.

2. \$35,000 in lost profits on the intercoolers (an estimated profit of \$60,000 less the approximately \$25,000 prepaid).

3. \$5,990 for unreturned valve springs.

4. \$426,904.03 as "impact damages."

5. \$81,123, the retainage withheld from its invoices by Cascade

6. \$44,412, on a quantum meruit basis, for services rendered to Cascade after April 28, 2004.

Damages awarded to each party

Based on my review of the evidence, part of which is summarized above, I find that Cascade has sustained its burden of proof on its damages claims as follows:

\$137,693.00 in back charges.

\$21,315.00 for replacement of the SME LOP drive gear.

\$25,000.00 for prepayment on intercoolers.

I therefore award to Cascade as breach of contract damages the sum of \$184,008.00.

1 I find that Powerhouse has carried its burden of proof on its
2 damage claim for \$336,404.00 in unpaid invoices. I therefore award
3 to Powerhouse as breach of contract damages the sum of \$336,404.00.

4 Accordingly, Powerhouse is entitled to a net verdict in the
5 amount of \$152,396.00.

6 Neither party is entitled to its claimed "impact damages."
7 Such damages are precluded by the language of the change orders.
8 The change orders provide:

9 This Change Order constitutes a full and final settlement
10 for all costs (including, but not limited to, all direct,
11 indirect, delay impact and ripple-effect costs of labor,
12 subcontractors, materials, and equipment; as well as all
taxes, insurance, bonds and profits) and time which are
in any way associated with or resulting from [work for
which the extension is granted].

13 Powerhouse seeks as damages the retainage withheld from its
14 invoices by Cascade, in the amount of \$81,123. The contract between
15 Cascade and AMHS has not closed, in part because of Powerhouse's
16 failure to complete its warranty work and replace defective parts.
17 Because AMHS has not yet released the retainage, Powerhouse is not
18 currently entitled to recover the retainage as damages.

19 Powerhouse is not entitled to declaratory relief that the back
20 charges are not owed to Cascade. The ruling on the back charges
21 owed to Cascade precludes such relief.

22 In reaching these awards of contract damages, I have
23 considered carefully all the evidence, including the testimony and
24 the exhibits. In many particulars the evidence was conflicting,
25 requiring me to resolve the conflict. I used the traditional
26 methods for resolving conflicts in testimony and for determining
27

1 the credibility of the various witnesses and their testimony. In
2 some instances there were questions that lingered about a witness's
3 personal knowledge to support the testimony. In other instances,
4 there were bold conclusions made by witnesses without any clue
5 being offered of the basis for the conclusion. In other instances,
6 there was testimony about "estimates" of an item of damage, again
7 without any insight being offered into the basis for that estimate
8 by which to judge its reasonableness. In all these situations, as
9 the finder of the facts, I have been required to determine which
10 party had the burden of proof, and after resolving these issues,
11 whether that burden had been sustained. Consistent with the jury's
12 instructions in a jury trial, if I could not tell on which side the
13 evidence weighed heavier, I resolved that issue against the party
14 who had the burden of proof.

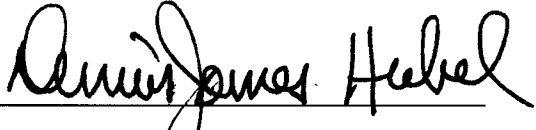
15 Attorney fees

16 Under Or. Rev. Stat. § 20.096(5), the prevailing party in an
17 action on a contract is the party in whose favor final judgment is
18 rendered. When there are claims and counterclaims on the same
19 contract, and both parties are awarded affirmative relief in the
20 form of damages, the court nets the damage awards in determining
21 the party in whose favor final judgment is rendered. Wilkes v.
22 Zurlinden, 328 Or. 626, 632 (1999). Powerhouse is therefore
23 entitled to recover its attorney's fees from Cascade.

24 The court has previously ordered that Cascade is entitled to
25 attorney's fees for trial preparation preceding the postponement of
26 the trial, to the extent that such trial preparation was
27

1 duplicated, in preparation for the new trial date. Cascade is
2 ordered to submit its documentation of these duplicated fees in
3 accordance with the court's Local Rules. They will be deducted from
4 Powerhouse's judgment.

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6 Dated this 9th day of November, 2007.

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9 Dennis James Hubel
10 United States Magistrate Judge
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